August 2, 2011

NOTICE OF EX PARTE

Ms. Marlene Dortch
Secretary
Federal Communications Commission
445 12st. SW
Washington, D.C. 20554

Re: Connect America Fund - WC Docket No. 10-90
A National Broadband Plan for Our Future – GN Docket No. 09-51
High-Cost Universal Service Support – WC Docket No. 05-337

Dear Ms. Dortch:

The Bill & Melinda Gates Foundation ("the foundation") respectfully submits these *ex parte* comments in response to the Commission's recent Notice of Proposed Rulemaking (NPRM) regarding reform of the high-cost program within the federal Universal Service Fund (USF), and creation of the Connect America Fund (CAF).[1]

At the Bill & Melinda Gates Foundation, we believe that all people deserve the opportunity to live healthy and productive lives. While technology and technology access play an important role in much of our work, it is especially critical to our work involving education and libraries.

- Through our education program, we work to make sure that students graduate high school ready for college or career, and that postsecondary students go on to complete degrees with value in the workforce. Through our U.S. Libraries program, we support efforts to sustain free public access to computers and the Internet in public libraries. Libraries represent a critical broadband access point for the one-third of Americans without broadband at home. As the nation's *de facto* "Digital Literacy Corps," librarians also help people learn how to use technology tools and the Internet to improve their lives and seek new opportunities.

[1] *See,* Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking, FCC 11-13, released February 9, 2011.

The connectivity discounts made available to schools and libraries through the Universal Service E-Rate Program have been instrumental in expanding broadband access, but in many cases the school or library's broadband capacity remains insufficient to meet the needs of students, educators and patrons. Further investment is needed to adequately support the technology services that library and school users, throughout the country, demand. We believe that additional investments from the High Cost Fund and Connect America Fund can have a profound impact on our nation by supporting schools and libraries in "getting up to speed" with high-capacity connections – broadband connections that these institutions will and already do use to serve their communities – and support national and community-level goals such as improved access to education, workforce development, community development, healthcare, civic engagement and small business development.

I. Summary

This filing presents two specific recommendations in response to the NPRM to fundamentally modernize the Universal Service Fund.

First, we recommend that High Cost and Connect America Fund investments in broadband be designed to provide "an acceptable quality of service for most interactive applications"[2] for community anchor institutions such as schools and libraries who are meeting the diverse application needs of multiple simultaneous users. More specifically, we advise that those receiving funding to support the provision of rural broadband services provide access to high-capacity and high quality broadband services that will support rural schools and libraries in fully meeting the community needs for access, education and community development.

Second, we recommend the creation of a dedicated fund within the Connect America Fund to cover construction costs for Fiber Lateral Builds (FLB) for schools and libraries. We recommend that approximately $450 million[3] of funds allocated to the Connect America Fund be allocated to provide Fiber Lateral Builds (FLB) on an annual basis. This investment would strategically complement the E-rate fund, by covering capital costs for "last mile" connections to schools and libraries which are not currently supported by the E-rate program. This provision would enable our nation's schools and libraries to obtain high-capacity fiber connections, providing

[2] "National Broadband Plan: Connecting America," reference to minimum requirements for broadband availability, page 135.

[3] We realize that the size of the Connect America Fund has not yet been determined and that the funding will vary. These figures are suggested as target amounts which may represent an appropriate investment in the context of the entire Fund. Funding in this order of magnitude would extend "last mile" access and accelerate high-capacity connections to schools and libraries.

immediate infrastructure upgrades needed for services like symmetrical video conferencing and data-heavy cloud computing applications that are currently available and emerging to support education, health and wellness, and workforce development. The new FLB fund would also position those institutions for affordable and incremental bandwidth growth over time as the needs of students and patrons escalate and as new applications create additional opportunities to use high-capacity networked services to drive educational outcomes and support community outcomes. While this suggestion in itself would not achieve recommendation four of the National Broadband Plan, ensuring that "every American community should have affordable access to at least 1 gigabit per second broadband service to anchor institutions,"[4] it would make significant progress toward that goal over time.

II. High-speed Broadband for Schools and Libraries – A Sound Investment in Education, Jobs, Civic Engagement, and Small Business Growth

The Bill & Melinda Gates Foundation supports the principle of extending the concept of Universal Service to include broadband services. The foundation also believes that investments should be grounded in sound economics. The Foundation invests in vaccines because preventing disease is far more cost effective and life-changing than supporting other healthcare interventions later in a person's life. Similarly, in today's wired, information age, affordable high-speed broadband connections for schools and libraries are the "vaccines" of broadband investments, creating a foundation for improved educational outcomes, workforce resiliency, and community engagement. Building high-capacity broadband connections to schools and libraries is a cost-effective intervention that will accrue meaningful returns not just for individuals and their communities, but for the nation. Schools and libraries also provide demand aggregation, bringing together users of all ages, incomes, needs and interests. And those connections at schools and libraries can anchor broader community deployment and adoption programs. More importantly, schools and libraries, more than other entities, combine broadband access with training and purposeful uses that enhance the value of the network and help more people live healthy and productive lives.

[4]" National Broadband Plan: Connecting America," FCC, March 16, 2010, ,http://download.broadband.gov/plan/national-broadband-plan-chapter-2-goals-for-high-performance-america.pdf, page 26.

For Individuals Living Below the Poverty Line, 40% Cite the Public Library as Their Only Form of Broadband Access

In 2009, nearly one-third of Americans age 14 or older—roughly 77 million people—took advantage of the free public Internet access provided at our nation's public libraries. Forty percent (40%), 30 million people, used library-based public access for employment purposes: exploring opportunities, looking for work, and sharpening skills. Forty-two percent (42%), 32.5 million people, used library-based public access for educational purposes. For individuals living below the poverty line, forty percent (40%) cite the public library as their only form of access to the Internet. Even people who do have home Internet access go to the library to get online. More than three-quarters of library patrons who accessed the Internet at a public library did have access at home or work, but they came to the library citing the need for greater bandwidth, seeking assistance from the librarian or just looking to connect in one of the most trusted institutions in our communities.[5]

On a typical day, library-based public access computers and wireless networks fill up when the libraries open as job seekers arrive to work on resumes, brush up on skills, and find and apply for jobs. Entrepreneurs access library databases and digital resources to research, launch and expand small businesses. Nonprofit leaders use online resources to research and start nonprofits and to search for grants. Seniors use the library to connect with family and friends, plan vacations and get health information. Home-schooling families use digital resources and reference services. Use surges after 3:00 p.m. when students arrive to do homework. But, online learning has made education a full-day activity at libraries, with online and in-person tutoring, homework help, student and professional exam preparation, computer skills and software classes. Many librarians allot time to proctor online tests for students of all ages. People with E-Readers stop by in the evening or access library services remotely to load their devices with e-Books or and other digital resources. As more services of all kinds and government services in particular move online, people from all walks of life go to the library to access these services, many of them seeking not just broadband access but a supportive environment where librarians answer questions and guide their research. Some librarians note that among the outside users of library wifi networks, ambulances and police cars stop by to upload and download data and connect to central services.[6]

[5] Opportunity for All: How the American Public Benefits from Internet Access at U.S. Libraries," http://www.imls.gov/pdf/OpportunityForAll.pdf, Institute of Museum and Library Services, 2010, pages 2, 5.
[6] Bill & Melinda Gates Foundation, U.S. Libraries Program, Accumulated input from the library field, June, 2011.

In 64.5% of communities, the library is the only source of no-fee public Internet access available.[7]

Schools and libraries are also at the heart of civic life in their communities. The Knight Commission on the Information Needs of Communities in Democracy produced "Informing Communities: Sustaining Democracy in the Digital Age" and eight other reports on topics such as civic communication, public media, open government, journalism and digital and media literacy. Every report includes attribution of services provided at public libraries that foster community conversations and enhance civic discourse. While broadband services at public libraries are often used to reach global resources, those same services allow communities to digitize local histories, connect with each other, and communicate on issues of local importance to community and government.[8]

While the majority of these comments address the foundation's experience accumulated over more than a decade's work in the U.S. Library program, we also believe that supporting college and career readiness will require high-capacity broadband connections at schools. Ensuring that all high school students graduate ready for success and are prepared to earn postsecondary degrees will require fundamental reforms, including providing students and teachers the tools needed for powerful classroom learning. Making full use of these instructional and learning tools will require access to much greater bandwidth than is present in most classrooms today. For example, recent multi-state efforts to identify a core set of shared college and career-ready standards is creating an unprecedented opportunity for interstate collaboration, including the development of next generation interactive courseware and assessments, educational resource sharing, and the use of advanced longitudinal and instructional data systems the success of which will depend in part on schools' abilities to expand access to broadband.

Of course this ideal aggregation of people and purpose within community anchor institutions, such as schools and libraries, is one reason why the National Broadband Plan ("NBP" or "Plan") specifically recommends the provision of high-capacity broadband service to anchor institutions as one of the seven key goals of the Plan:

> Goal No. 4: Every American community should have affordable access to at least 1 gigabit per second broadband service to anchor institutions such as schools, hospitals and government buildings.

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[7] "Public Library Funding and Technology Access Study, 2010-2011," American Library Association and University of Maryland, June 21, 2011, http://www.ala.org/ala/research/initiatives/plftas/2010_2011/plftas11-techlandscape.pdf, downloaded June 16, 2011, page 24.

[8] Knight Commission on the Information Needs of Communities in Democracy, "Informing Communities: Sustaining Democracy in the Digital Age," Posted by KnightComm on Apr 07, 2010, http://www.knightcomm.org/

Schools, libraries and health care facilities must all have the connectivity they need to achieve their purposes. This connectivity can unleash innovation that improves the way we learn, stay healthy and interact with government.[9]

III. HCF Investments Should Offer Schools and Libraries Broadband Access Options That Meet and Exceed Residential Quality Measures

The National Broadband Plan proposes targets for broadband capacity, recommending goals of 1 Gbps for community anchor institutions and 100 Mbps for 100 million households by 2020. In the near-term, the plan proposes "actual download speeds of at least 4 Mbps and actual upload speeds of at least 1 Mbps, [with] an acceptable quality of service for most common interactive applications" [10] and a commitment to revisit and revise these figures every four years.

For Community Anchor Institutions, such as schools and libraries, investments in the High Cost and Connect America Funds should be designed to provide "an acceptable quality of service for most interactive applications." While the residential measure of 4 Mbps download and 1 Mbps upload may be functional for a few libraries, for most institutions, high-capacity broadband connections at far greater upload and download speeds are needed to actually meet the basic availability standard of an acceptable quality of service for most interactive applications.

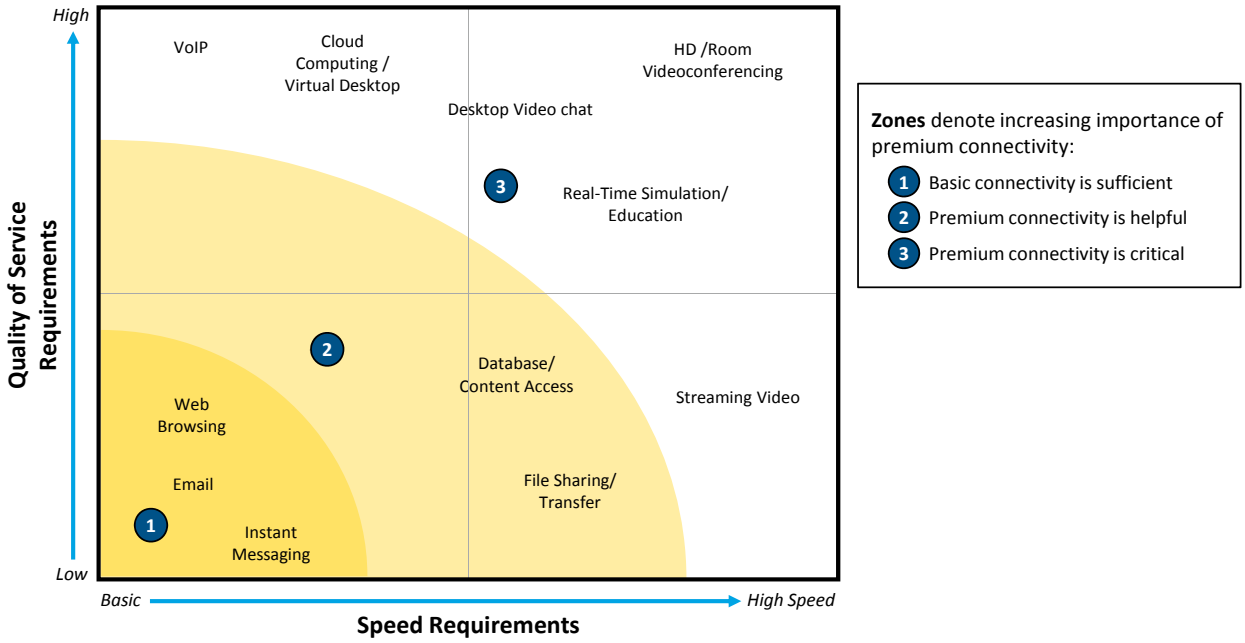
Institutional Speed and Quality of Service Measures Need to Consider User Applications Needs and Performance Requirements

Increasingly, teachers, students and library patrons use technologies and applications that require high-speed and high-quality broadband connections. As indicated in "Connections, Capacity, Community: Exploring Potential Benefits of Research and Education Networks for Libraries," common services include high definition videoconferencing, desktop video chat (e.g. Skype), online learning and assessment, streaming video, and Voice over Internet Protocol (VoIP). As shown in the table below, many of these applications require some combination of high bandwidth (speed) and high Quality of Service (QoS). Quality of Service parameters include measures of latency (transmission delay) and jitter (variability in the timing of packets'

[9] "National Broadband Plan: Connecting America," page 10.
[10] "National Broadband Plan: Connecting America," page 135.

arrival.) Another consideration for many emerging applications is the need for symmetrical bandwidth, the ability to transmit (upload) and receive (download) data at the same rate.[11]

Quality of Service and Speed Requirements of Example Applications



While the FCC's minimal 4 Mbps download/1 Mbps download requirement will certainly meet basic quality of service requirements for a couple of simultaneous users browsing the web, doing email or IM (zone 1 above), this capacity is insufficient with more simultaneous users or when users are accessing database services or doing file transfer (zone 2). More and more libraries are now supporting their communities with Internet and Intranet based services that fit more in zone 3: real time simultaneous education, HD video conferencing, video streaming, and cloud-computing.

Broadband Capacity at Community Anchors Should Account for Simultaneous Usage

One organization that has started to translate these principles into a practicum is the State Library of Kansas (SLK). Working with their Regional Library Systems, SLK has developed a Broadband Capacity Planning tool that looks at both the number of broadband connected

[11] "Connections, Capacity, Community: Exploring Potential Benefits of Research and Education Networks for Libraries," A study commissioned by the Bill & Melinda Gates Foundation, CSMG Consulting, Boston, MA, February 21, 2011, http://shlbc.org/content/bill-melinda-gates-foundation-study-research-and-education-broadband-networks, downloaded June 16, 2011.

devices and the specific applications or use-models for those devices in order to provide field guidance on specific broadband capacities needed to provide an acceptable quality of service for library patrons.

Similar to the model developed in "Connections, Capacity, Community," SLK estimated the bandwidth required on a per-device basis depending on what applications were in use at each station. They defined minimal, basic, intermediate and advanced usage models as follows:

Minimal	Library catalogues and tools, basic web pages and email
Basic	Most web pages, some streaming audio/video (YouTube)
Intermediate	Web pages with Flash/Shockwave/etc., streaming audio/video
Advanced	High quality audio/video, conferencing, online gaming and distance ed

SKL then simplified the model assuming a mixed application pattern and attention to evolving library branches from current connections toward more optimal connections in the short and long term.[12] It is also important to note that library broadband access must serve all of the library devices on the network. This means the connection must be engineered to support the staff computers, public access workstations, and wifi connected devices. And the engineering must include both general connections to the public Internet and other applications that require upload and download capacity. This includes Intranet services, VoIP and other point-to-point IP applications.

[12] According to Peter Haxton, State Data Coordinator for Kansas State Library, "Based on discussions with network professionals, a figure of 20% was established for a standard capacity planning increase. The "Short Range Optimum" is a step above the minimum figure. Because total broadband allocation is not a familiar concept and not how broadband packages are usually marketed, we develop a Download Speed Matrix. By studying connections in Kansas libraries, we found most libraries had a download to upload ratio of between 4:1 and 3:1. The 3:1 ratio leads to greater upload speeds, an important goal for us to position libraries as information creators, not just consumers. The download matrix applies the 3:1 ratio to the total allocation matrix." June 30, 2011.

Total Number of Internet Computers (staff and public)	Broadband Allocation (Downstream+Upstream) in Megabytes per Second (Mbps)		
	Minimum	Short Range Optimum	Long Range (2020)
>200	144.0	172.8	≥1,000
151-200	72.0	86.4	≥1,000
101-150	64.8	77.8	≥1,000
56-100	43.2	51.8	≥1,000
41-55	23.8	28.5	≥1,000
26-40	17.3	20.7	≥1,000
16-25	13.8	16.6	≥1,000
11-15	8.3	10.0	≥1,000
6-10	5.5	6.6	≥1,000
1-5	3.0	4.3	≥1,000

The State Library of Kansas is quick to note that the Broadband Capacity Planning tool will need continued updates as experience, application changes and patron use models evolve. While the bandwidth allocation figures will change over time, the structure and intent of the matrix is helpful. The bandwidth needed at a Community Anchor Institution such as a school or library must be based on the number of simultaneous user devices employed and the upload, download and service characteristics required for the specific application use models. Measuring capacity at a building level is insufficient.

Library Field Investing in Benchmarks for Public Technology Access at Libraries

As more Americans have flocked to the public library to use an ever-increasing array of technology services, the library field has struggled to define and develop appropriate technology and investment plans to keep pace with demand. In March of this year, a rigorous process to develop benchmarks to support high-quality computer and Internet access at public libraries was launched with support from the foundation. As noted in the press release from the Urban Libraries Council, "An unprecedented national coalition has formed to design and pilot a series of public access technology benchmarks for public libraries, with $2.8 million in funding from the Bill & Melinda Gates Foundation. The coalition—which represents library and local government leaders—will develop guidelines that define quality technology services at libraries and how to continuously improve them to motivate local re-investment in public technology

access at libraries."[13] Led by the Urban Library Council, with support from almost a dozen other library and community agencies, this initiative will work from inputs like the State Library of Kansas broadband matrix to develop a set of national benchmarks for technology and broadband access in public libraries. The Beta benchmarks are slated for pilots late in 2011 with a broader roll-out across the nation targeted for 2012.

The library benchmarks project and the work of the State Library of Kansas are illustrative of field efforts to better define the broadband capacity needed to support communities in accessing information technology and services, the capacity that is required to support education, workforce development, community development, healthcare, civic engagement and small business development through our nation's schools and libraries.

53.1% of Rural Libraries Report Their Current Connections Do Not Meet Patron Needs; 25.5% of Rural Libraries Report Connections are at Maximum Available

The "2010-2011 Public Library Funding and Technology Access Study" conducted by the American Library Association with support from the University of Maryland provides a current snapshot of broadband access at public libraries. Although libraries reported an increase in their broadband connection speeds, 44.9 percent of all public libraries and 53.1 percent of rural libraries indicated that those connection speeds are insufficient to meet patron needs some or all of the time. In other words, patron use of online services is growing faster than the libraries' ability to expand their broadband connectivity.[14]

While some 13 percent of libraries do plan to increase their bandwidth in the coming year, almost 20 percent of all libraries and 25.5 percent of rural libraries indicate that their connection speed is already at the maximum available in their community. [15]

Although system or branch level connection speeds are a common measure for community anchor institutions - and are, in fact, the measures collected via the state and national broadband mapping project - incoming broadband download speed at a library is a poor indicator of service quality or usability. When controlled for the reported number of workstations at a particular library branch, the "Public Library Funding and Technology Access Study" shows per workstation download speed of between 2 Kbps and 50 Mbps with a median download speed of only 375 Kbps and an average speed of only 1.2 Mbps, far below acceptable

[13] "National Coalition Will Establish Benchmarks to Support High-Quality Computer and Internet Access at Public Libraries." Urban Libraries Council, March 29, 2011, http://urbanlibraries.org/displaycommon.cfm?an=1&subarticlenbr=669.
[14] "Public Library Funding and Technology Access Study, 2010-2011," page 32
[15] "Public Library Funding and Technology Access Study, 2010-2011," Page 31

levels for most broadband applications.[16] These data shows that libraries need much more capacity than many are getting today.

We Encourage the FCC to Consider Aggregated Demand at CAIs When Administering HCF

Investments made through the High Cost Fund should be designed to ensure that schools and libraries have access to Advanced Telecommunications and Information Services. While 1 Gbps is an achievable goal for many communities and is more achievable with increased investment in fiber, all communities deserve sufficient capacity to support at least acceptable levels of service for users. We are very supportive of the High Cost Fund's strong focus on rural infrastructure expansion, of the vendor neutral and technology neutral administration of that fund, and of the effort to more directly include broadband access as a key fund investment. We encourage the FCC to consider the impact of simultaneous usage at schools and libraries when evaluating investments in the fund.

We feel that the above comments support and augment the May 23, 2011 SHLB Coalition comments[17] and the November 20, 2009 comments from the American Library Association (ALA)[18] which we also endorse.

IV. CAF Investments Should Include Designated Funding for Fiber Lateral Builds to Schools and Libraries

While the High Cost Fund needs to maintain a strong focus on increasing access in rural and underserved communities, the creation of the Connect America Fund poses an opportunity for limited, focused investments to realize some of more ambitious goals in the National Broadband Plan. Recommendation four sets a goal and recognizes that gigabit connections at the community-level are a sound investment in the future of both our country and of each community. Expanding high-speed broadband access at our nation's schools and libraries is a sound investment in education, jobs, civic engagement and small business growth. It is this combination of the need to provide equitable access to information and services, the inherent demand aggregation at schools and libraries, and the mission alignment with national purposes that underpin recommendation four in the National Broadband Plan.

[16] Community Attributes, *Analysis of "Public Library Funding & Technology Access Study Raw Data, 2010-2011."* June 2011.

[17] Comments of the Schools, Health, and Libraries Broadband Coalition, May 23, 2011.

[18] Submission of the ALA to the FCC Concerning NBP Public Notice #15 – November, 20, 2009.

The strongest measure that can be taken to invest in those national purposes is by expanding fiber connections to our nation's schools and libraries through a designated fund within the Connect American Fund. And there is no better time to increase investment in fiber lateral builds to schools and libraries.

Libraries and the providers who serve them are investing in fiber. The "2010-2011 Public Library Funding and Technology Access Study" asked whether a library outlet had a fiber optic connection. Overall, 36.2 percent of libraries reported affirmatively. A majority (65.6 percent) of urban library outlets have fiber optic connections, as compared to 42.8 percent of suburban outlets, and only 21.8 percent of rural outlets. These figures are indicative of some a reasonable level of availability, interest and commitment to increased investment in fiber-based services.[19]

Unfortunately, this means that more than 60 percent of all public libraries and almost 80 percent of rural libraries **do not** have a fiber connection.

Middle-mile and local fiber runs are closer to each school and library than they have ever been. Nearly all commercial providers have increased their investment in fiber and with 123 Comprehensive Community Infrastructure projects awarded as part of the Broadband Technology Opportunities Program (most of which included fiber deployment), more and more libraries will have the opportunity to consider broadband over fiber. Even a school or library that may only need a 10, 50 or 100 Mbps connection now will benefit from a fiber connection; providing that connection over fiber "future proofs" the school or library and positions community anchors to continue to offer the most engaging and valuable education, community, creative and professional services now and in the future.

Yet we know that middle-mile fiber running down the street may as well be in the next county without the ability to complete the lateral build to bring that fiber into a school or library building. Deploying fiber to an individual school or library can be cost-prohibitive for schools and libraries, especially in these times of fiscal austerity. For example, according to one study issued by the American Library Association, deploying fiber laterals can cost from $10,000 to $100,000 or more.[20]

[19] Public Library Funding and Technology Access Study, 2010-2011," Page 31

[20] J. Windhausen, Jr. and M. Visser, "Fiber to the Library: How Public Libraries Can Benefit from Using Fiber Optics for their Broadband Internet Connection," ALA Office of Information Technology Policy, Policy Brief No. 1, September 2009.

The Fund Should be Sized to Accelerate Gigabit Community Connections

In creating the Connect America Fund, we propose that a portion of the funding, on the order of $450 million,[21] be allocated to fund fiber lateral builds to schools and libraries. While more in depth analysis is needed to both size such an investment and to estimate the impact investment, the following provides an initial estimate. There are approximately 100,000 public schools,[22] 29,000 private schools,[23] and 16,000 public library buildings, or roughly 145,000 schools and libraries. Based on the most recent library study, 36.2% of the 16,000 public libraries already have fiber connections. If we assume that 50% of the schools are connected by fiber, then perhaps 64,500 schools and 10,000 public libraries could be eligible for funding through the FLB Fund. This eligibility pool could be further reduced if additional criteria such as Free and Reduced Lunch eligibility were taken into consideration. If the average deployment cost for a fiber lateral build to a school or library costs $45,000, then a fund of $450 million would support connections for 10,000 institutions a year. This investment would put the country on track to close the fiber connectivity gap and to achieve the goal of 1 gigabit fiber connections available in every community in America by the year 2020.

Designating Funds for Fiber Lateral Builds Would Complement the E-rate Sixth Order

This recommendation complements and completes elements of the FCC's Sixth Report and Order which expanded E-rate provisions to "allow eligible schools and libraries to receive support for the lease of fiber, whether lit or dark, as a priority one service, from any entity including but not limited to telecommunications carriers and non-telecommunications carriers such as research and education networks; regional, state, and local government entities or networks; non-profits and for profit providers; and utility companies."[24] The changes in the Sixth Report and Order were significant. At that time the Commission rightly declined "to extend support to cover special construction charges that may be incurred to build out connections from applicants' facilities to an off-premises fiber network, preferring to seek

[21] We realize that the size of the Connect America Fund has not yet been determined and that the funding will vary. These figures are suggested as target amounts which may represent an appropriate investment in the context of the entire Fund. Funding in this order of magnitude would extend "last mile" access and accelerate high-capacity connections to schools and libraries.

[22] Chen, C. (2011). Numbers and Types of Public Elementary and Secondary Schools From the Common Core of Data: School Year 2009–10 (NCES 2011-345). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved [date] from http://nces.ed.gov/pubsearch, page 3.

[23] "Private School Universe Survey: Number of private schools, by religious orientation and community type: 1989–90 through 2005–06," U.S. Department of Education,Institute of Education Sciences, http://nces.ed.gov/surveys/pss/tables/table_whs_01.asp, downloaded July 27,2011.

[24] Pursuant to sections 254(c)(3), (h)(1)(B), and (h)(2) of the Act, "Schools and Libraries Universal Service Support Mechanism and A National Broadband Plan for Our Future," CC Docket No. 02–6, GN Docket No. 09–51; FCC 10–175, Federal Communications Commission, Federal Register / Vol. 75, No. 232 / Friday, December 3, 2010 / Rules and Regulations, 75394

further comment in a subsequent proceeding on the potential effect of such changes on the fund,"[25] and leaving the applicant responsible for those costs. Given the current applications to the existing E-rate fund and the trajectory for continued demand for the fund, this decision was sound.

However, as the Commission considers the focus for the new Connect America Fund, we encourage that these costs be considered as core part of the CAF. Providing additional support for fiber lateral builds (construction and electronics) is critical to complement the existing E-rate program and to position schools and libraries to continue to fulfill their missions in education and community development in the 21st century. Building the bridge from middle-mile fiber into communities will provide a strong foundation for gigabit connections in communities, but more importantly, these last-mile connections to schools and libraries will provide a foundation for lifelong learning, workforce development, economic development, civic engagement, health information access and a myriad of other services that support healthy communities.

Additionally, while providing support for high-capacity broadband services for schools and libraries creates a strong return on investment, the support provided to community anchors through the combined effect of the Connect America Fund for fiber construction and E-rate for priority one and two services will also profoundly support all carriers in expanding fiber into communities across the country, bringing fiber even closer to residential and business customers.

The Connect America FLB fund would be available by application to any eligible E-rate provider.. This funding would be separate from the E-rate program and would not be "counted" against the "cap" on the existing E-rate Fund. Applicants could include service providers, municipal carriers, community providers and the schools and libraries themselves. Eligible services would include capital costs for construction, equipment, and terminating equipment. Operations and maintenance costs would not be eligible for coverage through the Connect American Fiber Lateral Build Fund. Preference should be given to those applicants that satisfy open network provisions.

V. Conclusion

As the FCC works to modernize the Universal Fund, there are clear opportunities to use these funds to drive even greater economic development, equity and innovation in American

[25] "Schools and Libraries Universal Service Support Mechanism and A National Broadband Plan for Our Future," CC Docket No. 02–6, GN Docket No. 09–51; FCC 10–175, Federal Communications Commission, Federal Register / Vol. 75, No. 232 / Friday, December 3, 2010 / Rules and Regulations, 75396

communities. We think that continued and expanded support of schools and libraries is a sound strategic investment in America's future.

We appreciate the changes made to the E-rate fund with the Sixth Order: removing the technology plan requirement, making dark fiber an eligible service, broadening the eligible carriers, and indexing the fund for inflation. The E-rate program continues to be a vital vehicle for supporting the most underserved communities, creating opportunities for all people to cost-effectively access information and services in supportive environments that combine broadband access with national purposes.

Creating the Connect America Fund to accelerate the deployment and use of high-capacity broadband services is a critical next step for the Commission. Designating a portion of the Connect America Fund for Fiber Lateral Builds to schools and libraries will position these critical community anchor institutions for the future, push high-capacity fiber deeper into communities, and put our nation on track to meet the fourth goal of the NBP:

> "Every American community should have affordable access to at least 1 gigabit per second broadband service to anchor institutions such as schools, hospitals and government buildings…
> Schools, libraries and health care facilities must all have the connectivity they need to achieve their purposes. This connectivity can unleash innovation that improves the way we learn, stay healthy and interact with government."[26]

Furthermore, as the Commission modernizes the High Cost Fund, Eligible Telecommunications Providers need to increase their focus on deploying high-capacity broadband as part of their commitment to offer access to Advanced Telecommunications Services to community anchor institutions, such as schools and libraries.

In combination, these two recommendations will serve millions of Americans and provide a strong return for ratepayers that support the Universal Service Fund.

Sincerely,

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[26] "National Broadband Plan: Connecting America," page 10.